<u>WHAT IS CLAIMED IS</u>

1   1.   A negotiated wireless peripheral device comprising:

2   a short-range wireless transceiver operative to support a position-dependent

3   ecommerce session with a mobile unit;

4   a negotiation module coupled to the short-range wireless transceiver, the

5   negotiation module operative to engage in a handshaking sequence with the mobile unit

6   to establish the position-dependent ecommerce session;

7   a WAN gateway module operative to couple a traffic stream generated in the

8   mobile unit and received via the short-range wireless transceiver to a wireline WAN

9   connection, so that the mobile unit may maintain an end-to-end secure connection though

10   the negotiated wireless peripheral device with a remote server coupled to the WAN;

11   a peripheral augmentation system operative to redirect one or more I/O streams

12   to/from the mobile unit to a set of one or more peripheral devices that support a non-area

13   constrained user interface to the user of the mobile; and

14   one or more protected memory segments that are provided for exclusive use by

15   one or more I/O processes that support the non-area constrained user interface.

1   2.   The negotiated wireless peripheral of Claim 1, further comprising:

2   an object that controls the non-area constrained user interface and maintains a

3   point-to-point secure connection with the application so that all application data stored in

4   the negotiated wireless peripheral is either in encrypted form or is in the protected

5   memory area.

1   3.   The negotiated wireless peripheral of Claim 2, wherein the object further

2   comprises:

3   a program module that prevents other programs from accessing the protected

4   memory segment.

1   4.   The negotiated wireless peripheral of Claim 2, wherein the object further

2   comprises:

3   a program module that monitors access to the memory segment and reports to a

4   unauthorized access to the protected memory segment.

1   5.   For use in a mobile unit that communicates with a negotiated wireless

2   peripheral (NWP) device, a method comprising:

3   establishing via a wireless local area network air interface a position-dependent

4   ecommerce session with the NWP device and contracting for the use of at least one

5   peripheral that supports enhanced user interface capabilities;

6   redirecting at least one input-output stream to the at least one peripheral supplied

7   by the NWP device in order to allow an application program to deliver content using a

8   non-area-constrained user interface;

9   establishing via a wireless wide area network connection an end-to-end secure

10   client-server session between the mobile unit and a remote server that provides an

11   application service; and

12   supplying a client-side and non-area constrained user interface to the user to allow

13   the user to interact with the remote server using the at least one augmented peripheral.

1   6.   The method of Claim 5, wherein the method further comprises:

2   passing a remote object to the NWP device, whereby the remote object performs

3   cipher processing and memory protection processing in the NWP device; and

4   invoking an input and/or output method on a stub object that securely

5   communicates commands and/or input/output data to the remote object.

1   7.   For use in a mobile unit that uses a wireless wide area network (wWAN)

2   air interface to communicate via a wide area network (WAN) with one or more remote

3   servers and a wireless local area network (wLAN) air interface to contract with a

4   negotiated wireless peripheral (NWP) device, a method comprising:

5   establishing via the wLAN air interface a position-dependent ecommerce session

6   with the NWP device;

7   redirecting at least one input-output stream to at least one peripheral supplied by

8   the NWP device in order to allow an application program to deliver content to a non-area-

9   constrained user interface, whereby the at least one peripheral includes an input device;

10   establishing or redirecting a client-server packet stream via the wLAN and

11   through the WAN to support an end-to-end secure session between the mobile unit and a

12   selected remote server, whereby the mobile unit performs cipher processing using at least

13   one security parameter from an end-to-end security association between the mobile unit

14   and the selected remote server;

15   storing in the mobile unit at least one secure information record for secure

16   transmission to with the remote server; and

17   securely passing the secure information record to the remote server without the

18   need to type in the information stored in the secure information record into the input

19   device supplied by the negotiated wireless peripheral.

1   8.   The method of Claim 7, wherein the input device is a computer keyboard.

1   9.   The method of Claim 7, wherein the method further comprises:

2   passing an object to the negotiated wireless peripheral device, whereby the object

3   maintains a point-to-point secure connection with the application and controls the storage

4   of input-output data into a protected memory segment in the negotiated wireless

5   peripheral device to inhibit a rouge processes from intercepting information from the non-

6   area constrained user interface.

1   10.   The method of Claim 7, wherein the method further comprises:

2   passing a remote object to the negotiated wireless peripheral, whereby the remote

3   object performs cipher processing and memory protection processing in the negotiated

4   wireless peripheral; and

5   invoking an input and/or output method on a stub object that securely

6   communicates commands and/or input/output data to the remote object.

1   11.   For use in a mobile unit that uses a wireless wide area network (wWAN)

2   air interface to communicate via a wide area network (WAN) with one or more remote

3   servers and a wireless local area network (wLAN) air interface to contract with a

4   negotiated wireless peripheral (NWP) device, a method comprising:

5   establishing via the wLAN air interface a position-dependent ecommerce session

6   with the NWP device;

7   establishing or redirecting a client-server packet stream via the wLAN and

8   through the WAN to support an end-to-end secure session between the mobile unit and a

9   selected remote server, whereby the mobile unit performs cipher processing using at least

10   one security parameter from an end-to-end security association between the mobile unit

11   and the selected remote server; and

12   projecting a non-area constrained user interface image on a projection-display

13   surface in order to supply a display area in support of a non-area constrained.

1   12.   The method of Claim 11, wherein the method further comprises:

2   storing in the mobile unit at least one secure information record for secure

3   transmission to the remote server; and

4   securely passing the secure information record to the remote server without the

5   need to enter the information stored in the secure information record into an input

6   peripheral supplied by the NWP device.

1   13.   The method of Claim 11, wherein the projecting involves a scanned laser

2   image.

1   14.   The method of Claim 11, wherein the projecting involves an LCD-based

2   optical projector.

15.   The method of Claim 11, wherein the method further comprises:

accepting a power input from the wireless negotiated peripheral device to supply power to the mobile unit.

16.   The method of Claim 11, wherein the method further comprises:

passing an object to the negotiated wireless peripheral device, whereby the object maintains a point-to-point secure connection with the application and controls the storage of input-output data into a protected memory segment in the negotiated wireless peripheral device to inhibit a rouge processes from intercepting information from the non-area constrained user interface.

17.   The method of Claim 11, wherein the method further comprises:

passing a remote object to the negotiated wireless peripheral, whereby the remote object performs cipher processing and memory protection processing in the negotiated wireless peripheral; and

invoking an input and/or output method on a stub object that securely communicates commands and/or input/output data to the remote object.

18.   A mobile unit comprising:

a set of peripherals that in total support an area-constrained user interface and a non-area constrained user interface; and

a display projector that projects a non-area constrained user interface display onto a display surface;

whereby the set of peripherals includes a pointing and selection device capable of controlling a cursor image on the projected non-area constrained user interface and making selections based on interactive portions of the projected non-area constrained user interface.

19.   The mobile unit of Claim 18, further comprising:

a short range wireless transceiver; and

an input configuration module capable of reconfiguring the mobile unit to accept a user interface input from an input device supplied by the short range wireless transceiver and to display this user input onto the projected non-area constrained user interface.

1   20.   The mobile unit of Claim 19, further comprising the input device, whereby
2   the input device comprises a lightweight portable keyboard.

1   21.   The mobile unit of Claim 20, whereby the display projector is physically
2   built into the lightweight portable keyboard.

1   22.   The mobile unit of Claim 21, whereby the lightweight portable keyboard
2   further comprises a frame buffer and a graphics control circuit used to provide a data
3   source to the display projector.

1   23.   The mobile unit of Claim 22, whereby display projector comprises a laser
2   projector that draws out a UI image.

1   24.   The mobile unit of Claim 22, whereby the laser projector comprises a
2   plurality of lasers of different colors to provide a color UI image.

1   25.   The mobile unit of Claim 22, whereby display projector comprises a laser
2   projector that uses raster scanning to project a UI image.

1   26.   The mobile unit of Claim 25, whereby the laser projector comprises a
2   plurality of lasers of different colors to provide a color UI image.